

Notice of Allowability

Application No.

10/656,279

Examiner

Hung T. Vy

Applicant(s)

DE ANGELIS, ROBERT HUGO

Art Unit

2163

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 4/19/2006.
2. ☒ The allowed claim(s) is/are 1-15.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.


Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date 5/27/2006.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____


SPE 2168

1. As of entry of the Applicant's response filed 4/19/2006 and the interview conducted with the attorney Mark Yang on 5/23/2006. The claims 27-47 are canceled and the all claims are replaced with the new claims based on Examiner's amendment as below.

Examiner's Amendment

2. An examiner's amendment to the record appears below. Should the changes and /or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.3.12. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

The following claim has been amended upon agreement by applicant during a telephone conversation with Mr. Mark Yang on 05/23/2006.

Cancel claims 27-47.

This listing of claims will replace all prior versions, and listing, of claims in the application.

Listing of Claims.

1. A method for use with differing metallic electro-mechanical infrastructures of resource-measuring meters, to minimize the effects on the performance of a first RF radiating/receiving element located within one such infrastructure due to its interactions with said such one infrastructure, comprising the step of placing a first metallic structure physically closer to said first RF radiating/receiving element than said such one infrastructure is, wherein said placed first metallic structure is RF radiating/receiving material and said first RF radiating/receiving element is a slot formed in said material, thereby forming a first slot antenna.

2. The method of claim 1, comprising the additional step of placing a second

Art Unit: 2163

metallic structure physically closer to a second RF radiating/receiving element than said such one infrastructure is, wherein said placed second metallic structure is RF radiating/receiving material and said second RF radiating/receiving element is a slot formed in said material, thereby forming a second slot antenna.

3. The method of claim 2, wherein said placing of first and second metallic structures is performed to effect cooperative RF performance of said first and second antennas.

4. The method of claim 3, wherein the cooperative performance is achieved by locating said first and second antennas so that the dominant null of the RF radiating/receiving element of one antenna is mitigated by the RF radiating/receiving element of the other antenna.

5. The method of claim 4, wherein said placing of first metallic structure includes (a) the supporting of said first metallic structure with a supporter having dielectric properties that do not adversely affect the performance of said first RF radiating/receiving element and (b) the shaping of said supporter to maximize the amount of surface space for supporting said first metallic structure.

6. A method of retrofitting a resource-measuring unit having a metallic infrastructure of prongs, brackets, rivets and metallic elements, with RF telemetry functionality, comprising the steps of:

(a) providing RF functionality with a first RF radiating/receiving element within said infrastructure; and

(b) placing a first metallic structure physically closer to said first RF radiating/receiving element than said infrastructure is,

Art Unit: 2163

wherein said placed first metallic structure is radiating/receiving material and said first RF radiating/receiving element is a slot formed in said material, thereby forming a first slot antenna.

7. The method of claim 6, further comprising the step of:

(c) placing a second metallic structure physically closer to said second RF radiating/receiving element than said infrastructure is.

8. The method of claim 7, wherein said placed second metallic structure is radiating/receiving material and said second RF radiating/receiving element is a slot formed in said material, thereby forming a second slot antenna.

9. The method of claim 8, wherein said RF functionality activates one or the other of, or both, said first and second slot antennas.

10. An RF telemetry unit for use with differing metallic electro-mechanical infrastructures of resource-measuring meters, comprising:

(a) a first RF radiating/receiving element locatable within one such infrastructure; and

(b) a first metallic structure placed physically closer to said first RF radiating/receiving element than any said one such infrastructure is, wherein said first metallic structure is RF radiating/receiving material and said first RF radiating/receiving element is a slot formed in said material, thereby forming a first slot antenna.

11. The unit of claim 10, further comprising:

(d) a second RF radiating/receiving element;

(e) a second metallic structure placed physically closer to said second RF radiating/receiving element than said one such infrastructure is, wherein, wherein

placed second metallic structure is RF radiating/receiving material and said second RF radiating/receiving element is a slot formed in said material, thereby forming a second slot antenna.

12. The unit of claim 11, wherein said first and second metallic structures are located to effect cooperative RF performance of said first and second antennas.

13. The unit of claim 12, wherein the cooperative performance is achieved by locating said first and second antennas so that the dominant null of the radiating/receiving element of one antenna is mitigated by the radiating/receiving element of the other antenna.

14. The unit of claim 13, wherein the meter has a cover and said first antenna is located under said cover.

15. The unit of claim 14, wherein the first metallic structure includes a supporter therefor, having dielectric properties that do not adversely affect the performance of the radiating/receiving element, and the supporter is shaped to maximize the amount of surface space available for supporting said first metallic structure.

Reasons for Allowance

3. Claims 1-15 are allowed.

The following is an examiner's statement of reason for allowance:

None of the references of record teaches or suggests the claimed a method for use with differing electro-mechanical infrastructure of resource measuring meters and an RF telemetry unit for use with differing metallic electro-mechanical infrastructures of resource-measuring meters, comprising, along with all the other claimed feature, a first

Art Unit: 2163

RF radiating/receiving element locatable within one such infrastructure and **a first metallic structure placed physically closer to said first RF radiating/receiving element than any said one such infrastructure** is, wherein the first metallic structure is RF radiating/receiving material and said first RF radiating/receiving element is **a slot** formed in said material, thereby forming **a first slot antenna**.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance".

4. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance".

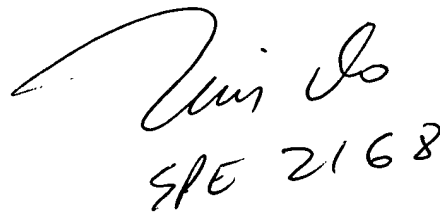
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hung T. Vy whose telephone number is 571-2721954. The examiner can normally be reached on 8.30am - 5.30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don Wong can be reached on 571 272 1834. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2163

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Hung Vy
2163
May 26, 2006.



SPE 2168